Sexually Transmitted Disease Surveillance 2000

Division of STD Prevention

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for HIV, STD, and TB Prevention
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This report is also available by Internet via the CDC home page at: **http://www.cdc.gov/std/stats/**

Foreword

"STDs are hidden epidemics of enormous health and economic consequence in the United States. They are hidden because many Americans are reluctant to address sexual health issues in an open way and because of the biologic and social characteristics of these diseases. All Americans have an interest in STD prevention because all communities are impacted by STDs and all individuals directly or indirectly pay for the costs of these diseases. STDs are public health problems that lack easy solutions because they are rooted in human behavior and fundamental societal problems. Indeed, there are many obstacles to effective prevention efforts. The first hurdle will be to confront the reluctance of American society to openly confront issues surrounding sexuality and STDs. Despite the barriers, there are existing individual- and community-based interventions that are effective and can be implemented immediately. That is why a multifaceted approach is necessary to both the individual and community levels.

To successfully prevent STDs, many stakeholders need to redefine their mission, refocus their efforts, modify how they deliver services, and accept new responsibilities. In this process, strong leadership, innovative thinking, partnerships, and adequate resources will be required. The additional investment required to effectively prevent STDs may be considerable, but it is negligible when compared with the likely return on the investment. The process of preventing STDs must be a collaborative one. No one agency, organization, or sector can effectively do it alone; all members of the community must do their part. A successful national initiative to confront and prevent STDs requires widespread public awareness and participation and bold national leadership from the highest levels."[1]

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[1]Concluding statement from the Institute of Medicine's Summary Report, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases,* National Academy Press, Washington, DC, 1997, p.43.

Preface

Sexually Transmitted Disease Surveillance, 2000 presents statistics and trends for sexually transmitted diseases (STDs) in the United States through 2000. This annual publication is intended as a reference document for policy makers, program managers, health planners, researchers, and others who are concerned with the public health implications of these diseases. The figures and tables in this edition supersede those in earlier publications of these data.

The surveillance information in this report is based on the following sources of data: (1) case reports from the STD project areas; (2) prevalence data from the Regional Infertility Prevention Programs, STD project areas, the National Job Training Program (formerly the Job Corps), the Jail STD Prevalence Monitoring Projects, the Men Who Have Sex With Men (MSM) Project, the U.S. Army, and the Indian Health Service; (3) sentinel surveillance of gonococcal antimicrobial resistance from the Gonococcal Isolate Surveillance Project (GISP); and (4) national sample surveys implemented by federal and private organizations.

The STD surveillance systems operated by state and local STD control programs, which provide the case report data, are the sources of many of the figures and all of the statistical tables in this publication. These systems are an integral part of program management at all levels of STD prevention and control in the United States. Because of incomplete reporting, the number of STD cases reported to CDC is less than the actual number of cases occurring among the United States population.

Sexually Transmitted Disease Surveillance, 2000 consists of four parts. The **National Profile** contains figures that provide an overview of STD morbidity in the United States. The accompanying text identifies major findings and trends for selected STDs. The **Special Focus Profiles** contain figures and text describing STDs in selected subgroups and populations that are a focus of national and state prevention efforts. The **Detailed Tables** provide statistical information about STDs at the state, county, city, and national levels. The **Appendix** includes the sources and limitations of the data used to produce this report. Included in this section, are Figures A1-A3 that show progress made by states in converting from hardcopy aggregate reporting to electronic line-listed data.

Selected figures and tables in this document identify goals that reflect progress towards some of the Healthy People 2010 (HP2010) national health status objectives for STDs.[1] **Appendix** Table A1 displays progress made towards the HP2010 Priority Area 25, for STDs. These objectives are used as reference points throughout this edition of *Sexually Transmitted Disease Surveillance, 2000*.

Any comments and suggestions that would improve the usefulness of future publications are appreciated and should be sent to Director, Division of STD Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, 1600 Clifton Road, Mailstop E-02, Atlanta, Georgia, 30333.

[1] U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

Acknowledgments

Publication of this report would not have been possible without the contributions of the State and Territorial Health Departments and the Sexually Transmitted Disease Control Programs, the Regional Infertility Prevention Programs, the U.S. Department of Labor, the Indian Health Service, the John Hopkins University Chlamydia Research Laboratory, and the U.S. Army, which provided surveillance data to the Centers for Disease Control and Prevention.

This report was prepared by the following staff and contractors of the Division of STD Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention: Charles Akers, Stu Berman, Susan Bradley, Jim Braxton, Sharon Clanton, Susan Conner, Deblina Datta, Darlene Davis, Owen Devine, Linda Webster Dicker, Melinda Flock, LaZetta Grier, Alesia Jester Harvey, James Heffelfinger, Rose Horsley, Kathleen Hutchins, Christopher Iverson, Richard Kahn, William Levine, Catherine McLean, Debra Mosure, LuEtta Schneider, Maya Sternberg, Katherine Stone, Emmett Swint, Susan Wang, Hillard Weinstock, and Akbar Zaidi.

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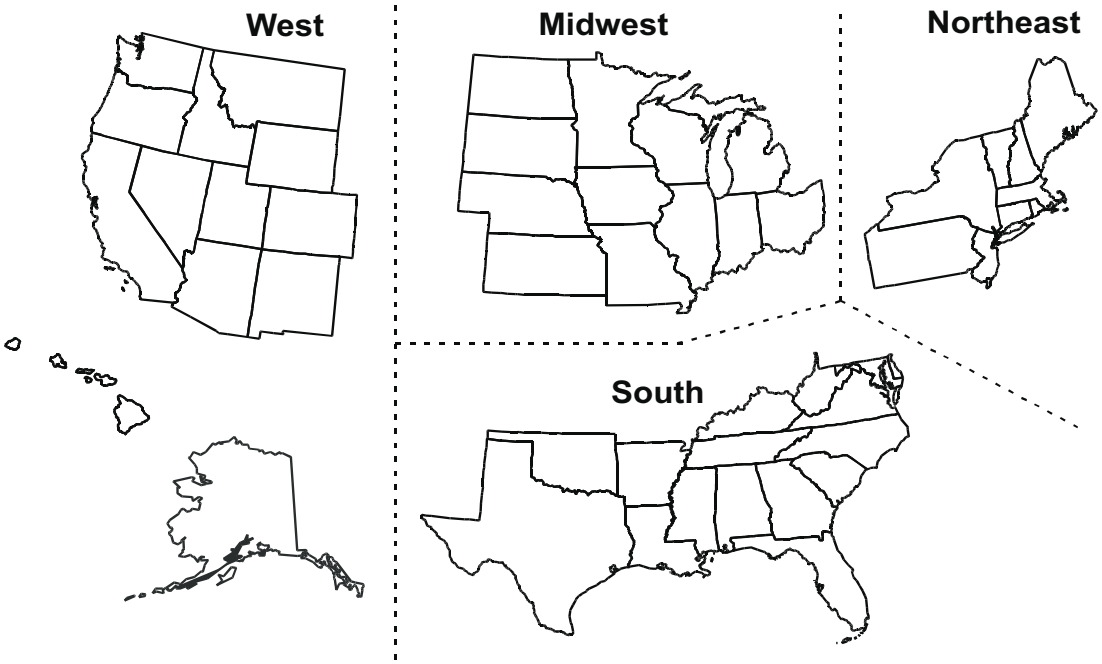

West	Midwest	South	Northeast
Alaska	Illinois	Alabama	Connecticut
Arizona	Indiana	Arkansas	Maine
California	Iowa	Delaware	Massachusetts
Colorado	Kansas	District of Columbia	New Hampshire
Hawaii	Michigan	Florida	New Jersey
Idaho	Minnesota	Georgia	New York
Montana	Missouri	Kentucky	Pennsylvania
Nevada	Nebraska	Louisiana	Rhode Island
New Mexico	North Dakota	Maryland	Vermont
Oregon	Ohio	Mississippi	
Utah	South Dakota	North Carolina	
Washington	Wisconsin	Oklahoma	
Wyoming		South Carolina	
		Tennessee	
		Texas	
		Virginia	
		West Virginia	

National Overview of Sexually Transmitted Diseases, 2000

The logo on the cover of *Sexually Transmitted Disease Surveillance, 2000* is a reminder of the multifaceted, national dimensions of the morbidity, mortality, and costs that result from sexually transmitted diseases (STDs) in the United States. It highlights the central role of STD prevention in improving health among women and infants and in promoting HIV prevention. Organized collaboration among interested, committed public and private organizations is the key to reducing STDs and their related health burdens in our population. As noted in the report of the Institute of Medicine, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases,*[1] surveillance is a key component of our efforts to prevent and control these diseases.

This overview summarizes national surveillance data on the three diseases for which we have federally-funded control programs: chlamydia, gonorrhea, and syphilis. Several observations for 2000 are worthy of note.

Chlamydia

In 2000, 702,093 cases of genital *Chlamydia trachomatis* infection were reported to CDC (Table 1). This case count corresponds to a rate of 257.5 cases per 100,000 persons, an increase of 2.3% compared with the rate of 251.6 in 1999. Rates of reported chlamydial infection among women have been increasing annually since the late 1980s when public programs for screening and treatment of women were first established to avert pelvic inflammatory disease and related complications. Chlamydia screening and reporting are likely to expand further in response to the recently implemented Health Plan Employer Data and Information Set (HEDIS) measure for chlamydia screening of sexually active women 15 to 25 years of age who are provided medical care through managed care organizations.[2] The increase in chlamydia case reports in 2000 most likely represents a continued increase in screening for this infection and also increased use of more sensitive chlamydia screening tests than used in prior years.

In 2000, the overall reported rate of chlamydial infection in the U.S. among women (404.0 cases per 100,000 females) was approximately four times the reported rate among men (102.8 cases per 100,000 males), reflecting the large number of women screened for this disease. However, with the increased availability of urine testing, men are increasingly being tested for chlamydial infection. From 1996 to 2000, the reported chlamydial infection rate in men increased by 71.9% (from 59.8 to 102.8 cases per 100,000 males) compared with a 26.4% increase in women over this period (from 319.5 to 404.0 cases per 100,000 females), reflecting increased screening among men (Tables 5 and 6) .

Data from multiple sources on prevalence of chlamydial infection in defined populations have been useful in monitoring disease burden and guiding chlamydia screening programs. In 2000, the median state-specific chlamydia test positivity among women 15 to 24 years who were screened at selected family planning clinics in all states, the District of Columbia, Puerto Rico, and the Virgin Islands was 5.2% (range, 2.3% to 15.8%) (Figure 7), and at selected prenatal clinics in 23 states and

Puerto Rico, 5.9% (range, 2.2% to 14.5%) (Figure F). For economically-disadvantaged women 16 to 24 years who entered the National Job Training Program in 2000, from 30 states and Puerto Rico, the median state-specific prevalence was 11.9% (range, 6.8% to 19.8%) (Figure L). For women 15 to 30 years screened at Indian Health Service (IHS) clinics in four IHS regions, the prevalence ranged from 3.9% to 9.9% (Figure V). For adolescent women entering juvenile detention centers in 24 U.S. counties, the median chlamydia positivity was 15.0% (range, 1.5% to 28.9%) (Figure GG). For male entrants to the U.S. Army who were screened in 1999 and 2000, the overall chlamydia prevalence was 4.7% (range, 1.0% to 11.1% by state of residence) (Figure N). For adolescent men entering juvenile detention centers in 30 counties, the median chlamydia positivity was 6.6% (range, 0.9% to 13.0%) (Figure HH). Although these data on prevalence are not entirely comparable because of differences in the populations screened, in the performance characteristics of the screening tests, and variations in screening criteria, they provide important information on the continuing high burden of disease in the United States.

In parts of the United States where large scale chlamydia screening programs have been instituted, prevalence of disease has declined substantially. During 1988-2000, among 15-to 44-year-old women participating in the screening programs in Health and Human Services (HHS) Region X family planning clinics, chlamydia test positivity declined 59.2% (from 13.0% to 5.3%) (Figure 8). After adjusting trends in chlamydia positivity to account for changes in laboratory test methods and associated increases in test sensitivity, chlamydia test positivity decreased in four of 10 HHS regions from 1999 to 2000, and increased in six regions. Although chlamydia positivity has declined in the past year in some regions, most likely due to the effectiveness of screening and treating women, continued expansion of screening programs to populations with higher prevalence of disease may have contributed to the increases in positivity seen in other regions. See the **Appendix** for the composition of the HHS regions.

Gonorrhea

Following a 73.9% decline in the reported rate of gonorrhea from 1975 (467.7) to 1997 (122.0), overall rates increased in 1998 (131.6) and have since remained essentially unchanged at the 1998 rate (Table 1). The gonorrhea rate for 2000 (131.6 cases per 100,000 persons) remained essentially unchanged from 1999 (132.0 cases per 100,000 persons) and 1998 (131.6 per 100,000 persons) (Table 1). The 2000 rate for gonorrhea exceeds the Healthy People 2010 (HP2010) objective of 19 cases per 100,000 persons.

The gonorrhea rate in the U.S. among females in 2000 was similar to the rate in 1999 (128.3 and 128.7 cases per 100,000 females, respectively) (Table 14). Gender differences in gonorrhea rates in 2000 (female rate 128.3 per 100,000, male rate 134.6 per 100,000) were similar to the gender difference in rates observed in 1999 (Tables 14 and 15). In contrast to the 20 years prior to 1998, which generally exhibited decreasing age-specific rates for gonorrhea, for most 5-year age categories there was little change in the reported rates between 1999 and 2000. As with chlamydia, rates of gonorrhea in women are particularly high in 15- to 19-year-olds, and in men, are highest in the 20- to 24-year age group.

In 2000, new data on gonorrhea prevalence in defined populations were available from several sources. These new data showed continuing high burden of disease in adolescents and young adults in some parts of the United States. Among 15- to 24-year-old women attending selected family planning clinics in 34 states and the Virgin Islands, the median state-specific gonorrhea prevalence was 0.9 (range, 0.0 % to 4.5%) (Figure 15). For women in this age group attending selected

prenatal clinics in 15 states, the median prevalence was 0.9% (range, 0.0% to 3.7%) (Figure G). For 16- to 24-year-old women entering the National Job Training Program in 21 states and Puerto Rico in 2000, the median gonorrhea prevalence was 3.5% (range, 0.9% to 8.5%) (Figure O). For adolescent women entering juvenile detention facilities, the median positivity for gonorrhea was 4.9% (range, 0.5% to 13.0%) (Figure II); the median positivity in adolescent men entering juvenile detention facilities was 2.4% (range, 0.6% to 4.2%) (Figure JJ).

Antimicrobial resistance in *Neisseria gonorrhoeae* remains a continuing concern; the most recent threat has been the increase in fluoroquinolone resistance reported from several Asian countries. Ciprofloxacin is a fluoroquinolone antibiotic that has been recommended for treatment of gonorrhea by CDC; this oral medication is inexpensive and effectively treats gonorrhea with a single dose. Although only 0.4% of *N. gonorrhoeae* isolates tested through the Gonococcal Isolate Surveillance Project (GISP) in 2000 demonstrated resistance to ciprofloxacin, this is a substantial increase from 1998, when only 0.1% of isolates were reported to be resistant. Of note, the proportion of GISP isolates from Honolulu that were resistant to ciprofloxacin remains high and was 14.3% in 2000. This trend reinforces the recommendation made by CDC in 2000 that fluoroquinolones not be used to treat gonorrhea acquired in Hawaii[3]. In 2000, there was also a high proportion of GISP isolate resistant to ciprofloxacin (5.6%) in Orange County, California. See **Appendix** for a further description of GISP.

Data on characteristics of patients in the GISP sample have been used to obtain information on the sexual orientation of male STD clinic patients with gonorrhea. In 2000, there was a continuing increase in the proportion of GISP isolates from men who have sex with men (MSM). In 2000, the proportion of GISP isolates from MSM increased to 13.9% compared to 13.1% in 1999. In 1988 only 4.0% of isolates were from MSM. The proportional increase in MSM in GISP has corresponded to an absolute increase in gonorrhea cases among MSM at STD clinics in several large cities that participate in GISP.

Syphilis

The National Plan to Eliminate Syphilis from the United States was developed and announced by the Surgeon General in October 1999[4] in response to several factors, including the important role of syphilis in facilitating the transmission of HIV infection, the differential impact of syphilis on racial and ethnic minorities, and the recent decline in this disease. The 5,979 cases of primary and secondary (P&S) syphilis reported in 2000 were the fewest cases ever reported in the United States. However, the P&S syphilis rate of 2.2 per 100,000 persons (the lowest since national reporting began in 1941) remains substantially above the goal for syphilis elimination of 0.4 case per 100,000 persons (about 1,000 cases per year)[4] (Table 1), and the HP2010 goal of 0.2 per 100,000 persons.

The number of P&S syphilis cases reported in 2000 was 9.6% lower than the 6,617 cases reported in 1999. However, this decline was substantially less than the reductions of approximately 20% per year since the last major syphilis epidemic peaked in 1990. Although this smaller decline may partially reflect improved case finding and reporting, it also reflects the persistence of this disease in some populations and recent outbreaks in several geographic areas, including outbreaks among MSM.

One factor that greatly facilitates syphilis elimination efforts is that this disease continues to be primarily reported only in specific areas of the country. In 2000, 2,520 (80.2%) of the 3,139 counties in the United States reported no cases of P&S syphilis (see **Appendix** for details on county coding).

Half of all the P&S syphilis cases were reported from only 21 counties and one city (0.7% of total number of U.S. counties) (Table 24). However, the 2000 P&S syphilis rates were greater than the HP2010 objective in 595 counties (18.9% of the total number of U.S. counties). These 595 counties accounted for more than 99.5% of all reported P&S syphilis cases (5,952 out of 5,979 cases). Sixty-nine percent (412 out of 595) of these counties are located in the southern part of the United States. These data suggest that comprehensive syphilis prevention efforts focused in the South could markedly reduce the number of syphilis cases occurring in the United States.

Between 1999 and 2000, the national rate of congenital syphilis decreased by 7.6%, from 14.5 to 13.4 cases per 100,000 live births (Table 39). The continuing reduction in congenital syphilis rates, occurring since the early 1990s, reflects the substantial reduction in the rate of P&S syphilis among women over the same period. In 2000, approximately one half of the states and outlying areas had a reported rate of congenital syphilis that was greater than the HP2010 objective of 1.0 case per 100,000 live births (Table 38).

Although wide disparities exist in the reported rates of STDs among racial and ethnic groups, there has been a reduction in these differences for some diseases over the past five years. For example, the P&S syphilis rate reported for 2000 among African-Americans was 21 times the rate reported among whites, reflecting a substantial decline from 1996, when the rate among African-Americans was 50 times greater than that among whites (Table 32B). Although reporting biases likely magnify differences in reported rates by race and ethnicity, these factors continue to be risk markers among the U.S. population that correlate with other, more fundamental determinants of health status such as socioeconomic status and access to quality medical care.

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[1]Institute of Medicine. *The Hidden Epidemic: Confronting Sexually Transmitted Diseases, Committee on Prevention and Control of Sexually Transmitted Diseases*, National Academy Press, Washington, DC, 1997.

[2]National Committee for Quality Assurance (NCQA). *HEDIS 2000: Technical Specifications*, Washington, DC, 1999, pp. 68-70, 285-286.

[3]Centers for Disease Control and Prevention. Fluoroquinolone-resistance in *Neisseria gonorrhoeae*, Hawaii, 1999, and decreased susceptibility to azithromycin in *N. Gonorrhoeae*, Missouri, 1999. *MMWR* 2000;49:833-837.

[4]Division of STD Prevention. *The National Plan to Eliminate Syphilis from the United States*. National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, 1999.